

Geometry of Nonpositively Curved Manifolds. By Patrick B. Eberlein. University of Chicago Press, Chicago. (1996). 449 pages. \$90.00, £71.95 (cloth); \$45.00, £35.95 (paper).

Contents:

Acknowledgments. Introduction. 1. Notation and preliminaries. 2. Structure of symmetric spaces of noncompact type. 3. Tits geometries. 4. Action of isometries on $\tilde{M}(\infty)$. 5. A splitting criterion. 6. Isometries of \mathbb{R}^n . 7. Spaces with Euclidean factors. 8. Mostow rigidity theorem. 9. Rigidity theorems and characterizations of symmetric spaces of higher rank. 10. Fundamental group and geometry. References. Index of definitions and terminology. Index of notation.

Java AWT Reference. By John Zukowski. O'Reilly, Sebastopol, CA. (1997). 1045 pages. \$39.95.

Contents:

Preface. 1. Abstract window toolkit overview. 2. Simple graphics. 3. Fonts and colors. 4. Events. 5. Components. 6. Containers. 7. Layouts. 8. Input fields. 9. Pick me. 10. Would you like to choose from the menu? 11. Scrolling. 12. Image processing. 13. AWT exceptions and errors. 14. And then there were applets. 15. Toolkit and peers. 16. Data transfer. 17. Printing. 18. java.applet reference. 19. java.awt reference. 20. java.awt.datatransfer reference. 21. java.awt.event reference. 22. java.awt.image reference. 23. java.awt.peer reference. Appendices. A. Using properties and resources. B. HTML markup for applets. C. Platform-specific event handling. D. Image loading.

Java Virtual Machine. By Jon Meyer and Troy Downing. O'Reilly, Sebastopol, CA. (1997). 426 pages. \$32.95 (diskette included).

Contents:

Preface. 1. Overview. 2. Quick tour. 3. Components of the machine. 4. Classes. 5. Security. 6. Implementation notes. 7. Data operations. 8. Arithmetic. 9. Flow control. 10. Exceptions. 11. Threads. 12. Class file reference. 13. Instruction reference. Appendices. A. Instructions by function group. B. Instructions by opcode. C. Jasmin user guide. D. The JAS library. Index.

The Limits of Medicine: How Science Shapes Our Hope for the Cure. By Edward Golub. University of Chicago Press, Chicago. (1994). 258 pages. \$14.95.

Contents:

Preface to the paperback edition. A few important words to the reader. Introduction: Framing health and disease. I. Reframing the external world. 1. The constant presence of death. 2. *La Longue durée*. 3. The seeds of change. 4. "Pasteur" and the authority of science. 5. Rewriting history: The triumph of science. II. Reframing the internal world. 6. "Never to die of a disease in the future". 7. Reframing the internal world. 8. Magic bullets and the new paradigm of medicine. 9. The therapeutic revolution. III. Framing the future. 10. Reshaping the goals of medicine in the era of chronic diseases. Finale: Changing the metaphor. Readings and notes. Acknowledgments. Index.

Computing Concepts with C++ Essentials. By Cay S. Horstmann. John Wiley & Sons, New York. (1997). 669 pages. \$55.95.

Contents:

Preface. 1. Introduction. 2. Fundamental data types. 3. Objects. 4. Decisions. 5. Functions. 6. Iteration. 7. Testing and debugging. 8. Classes. 9. Vectors and matrices. 10. Files. 11. Modules. 12. Algorithms. 13. An introduction to data structures. 14. Inheritance and polymorphism. Appendices. A1. C++ language coding guidelines. A2. C++ language summary. A3. Moving from C++ to C. Glossary. Photo credits. Index.

Nonmonotonic Reasoning. By Grigoris Antoniou. MIT Press, Cambridge, MA. (1997). 285 pages. \$35.00.

Contents:

Series foreword. I. Prelude. 1. Introduction. 2. Predicate logic. II. Default logic. 3. Default reasoning. 4. Operational semantics of default logic. 5. Normal default theories. 6. Semi-normal default theories. 7. Alternative approaches. 8. Priorities among defaults. References for Part II. III. Classical approaches to nonmonotonic reasoning. 9. Autoepistemic logic. 10. Computing expansions of AE-theories. 11. Embedding default logic into AE-logic. 12. Circumscription. References for Part III. IV. Abstract and dynamic approaches to nonmonotonic reasoning. 13. Nonmonotonic inference relations. 14. Belief revision. 15. Implementing belief revision. 16. Interconnections. References for Part IV. V. Nonmonotonic reasoning and logic programming. 17. The system *Theorist*. 18. Stable model semantics of logic programs. 19. Well-founded semantics. References for Part V. VI. Finale. 20. Future directions of nonmonotonic reasoning research. Bibliography. Index.

Solving the Frame Problem: A Mathematical Investigation of the Common Sense Law of Inertia. By Murray Shanahan. MIT Press, Cambridge, MA. (1997). 407 pages. \$45.00.

Contents:

Series foreword. Preface. Introduction. 1. What is the frame problem? 2. Logical foundations. 3. Towards a non-monotonic solution. 4. Chronological minimisation. 5. Causal minimisation. 6. Introducing state-based

minimisation. 7. Generalising state-based minimisation. 8. Tailor-made techniques. 9. Narratives in the situation calculus. 10. Incomplete narratives and concurrent actions. 11. The foundations of logic programming. 12. Logic programs for reasoning about action. 13. Simplifying and extending the event calculus. 14. A circumscriptive calculus of events. 15. Applying the calculus of events. 16. Forced separation. 17. Explanation: The assimilation of observations. Epilogue: Is the frame problem solved? Bibliography. Appendices. A. Proof of Theorem 9.7.5. B. Proof of Theorem 14.5.2. C. Temporal projection algorithms. D. Proof of Theorem 15.5.3. Index.

Designing Incentive Regulation for the Telecommunications Industry. By David E. M. Sappington and Dennis L. Weisman. MIT Press/AIE Press, Cambridge, MA/Washington, DC. (1996). 388 pages. \$35.00.

Contents:

Foreword. Acknowledgments. About the authors. 1. Introduction and overview. 2. Today's telecommunications industry. 3. A review of existing regulatory plans. 4. Regulatory goals and resources. 5. Selecting performance criteria and reward structures. 6. Designing options in incentive regulation plans. 7. Fostering regulatory commitment powers. 8. Competition, regulation, and deregulation. 9. RBOC entry into interLATA long-distance markets. 10. Pitfalls in measuring the effects of incentive regulation. 11. Empirical studies of the effects of incentive regulation. 12. Conclusion. Glossary. References. Case and regulatory proceeding index. Name index. Subject index.

An Introduction to Natural Computation. By Dana H. Ballard. MIT Press, Cambridge, MA. (1997). 307 pages. \$45.00.

Contents:

List of figures. List of tables. Preface. I. Natural computation. 1. Core concepts. 2. Fitness. 3. Programs. 4. Data. 5. Dynamics. 6. Optimization. II. Memories. 7. Content-addressable memory. 8. Supervised learning. 9. Unsupervised learning. III. Programs. 10. Markov models. 11. Reinforcement learning. IV. Systems. 12. Genetic algorithms. 13. Genetic programming. 14. Summary. Index.

Web Client Programming with Perl. By Clinton Wong. O'Reilly, Sebastopol, CA. (1997). 213 pages. \$29.95.

Contents:

Preface. 1. Introduction. 2. Demystifying the browser. 3. Learning HTTP. 4. The socket library. 5. The LWP library. 6. Example LWP programs. 7. Graphical examples with Perl/Tk. Appendices. A. HTTP headers. B. Reference tables. C. The Robot Exclusion Standard. Index.

NetTravel: How Travelers Use the Internet. By Michael Shapiro. O'Reilly, Sebastopol, CA. (1997). 284 pages. \$24.95 (CD included).

Contents:

Foreword. About the author. Acknowledgments. Introduction. 1. Destination anywhere. 2. Planes, trains, and automobiles. 3. Room and board. 4. Finding the best deals. 5. Taking care of business. 6. The ultimate vacation. 7. Adventure travel. 8. Newsgroups and mailing lists. 9. Traveling with the net. 10. How travel agents use the net. Appendices. A. NetTravel toolbox—Sites listed by subject. B. Basic internet training. C. A guide to the online services. Index.

The Practical Imagination: The German Sciences of State in the Nineteenth Century. By David F. Lindenfeld. University of Chicago Press, Chicago, IL. (1997). 382 pages. \$57.00, £45.50 (cloth); \$19.95, £15.95 (paper).

Contents:

List of tables and figures. Acknowledgments. Introduction: A theoretical framework. 1. The Seventeenth- and Eighteenth-Century background: Classification. 2. The French Revolutionary and Napoleonic Era, 1789–1815: Assimilation. 3. The sciences of state at their height, 1815–1840: Deliberation. 4. A period of transition, 1840–1866: Variation. 5. A truncated revival, 1866–1890: Organized research and charisma. 6. The Wilhelminian Era, 1890–1914: Specialization and clarification. Epilogue. Appendix: The data from university catalogues. Abbreviations. Bibliography. Index.

Evolution of Parallel Cellular Machines: The Cellular Programming Approach. By Moshe Sipper. Springer-Verlag, Berlin. (1997). 198 pages. DM 58.00, öS 423.40, sFr 51.50.

Contents:

Preface. 1. Introduction. 2. Universal computation in quasi-uniform cellular automata. 3. Studying artificial life using a simple, general cellular model. 4. Cellular programming: Coevolving cellular computation. 5. Toward applications of cellular programming. 6. Online autonomous evolware: The firefly machine. 7. Studying fault tolerance in evolved cellular machines. 8. Coevolving architectures for cellular machines. 9. Concluding remarks and future research. Appendices. A. Growth and replication: Specification of rules. B. A two-state, $r = 1$ CA that classifies density. C. Specification of evolved CAs. D. Specification of an evolved architecture. E. Computing acd and equivalent d' . Bibliography. Index.